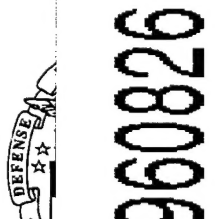
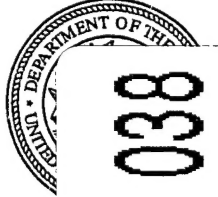




CALSTEST NETWORK

# AFCTN Test Report 93-041

AFCTB-ID  
93-034



## Technical Publication Transfer Using Northrop Corporation's Data MIL-M-28001A (SGML) Quick Short Test Report

14 April 1993

Prepared for  
Electronic Systems Center

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**AFCTN Test Report**  
**93-041**

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**93-034**

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**Technical Publication Transfer**  
**Using:**  
**Northrop Corporation's Data**

**MIL-M-28001A (SGML)**

**Quick Short Test Report**

**14 April 1993**

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## 1. Introduction

### 1.1 Background

The Department of Defense (DoD) Air Force Continuous Acquisition and Life-Cycle Support (CALS) Test Network (AFCTN) is conducting tests of the military standard for the Automated Interchange of Technical Information, MIL-STD1840A, and its companion suite of military specifications. The AFCTN is a DoD sponsored confederation of voluntary participants from industry and government managed by the Electronic Systems Center (ESC).

The primary objective of the AFCTN is to evaluate the effectiveness of the CALS standards for technical data interchange and to demonstrate the technical capabilities and operational suitability of those standards. Two general categories of tests are performed to evaluate the standards; formal and informal.

Formal tests are large comprehensive tests that follow a written test plan, require specific authorization from the DoD, and may take months to prepare, execute, and report.

Informal tests are quick and short, used by the AFCTN technical staff, to broaden the testing base. They include representative samples of the many systems and applications used by AFCTN participants. They also allow the AFCTN staff to gain feedback from many industry and government interpretations of the standards, to increase the base of participation in the CALS initiative, and respond to the many requests for help that come from participants. Participants take part voluntarily, benefit by receiving an evaluation of their latest implementation (interpretation) of the standards, interact with the AFCTN technical staff, gain experience using the standards, and develop increased confidence in them. The results of informal tests are reported in Quick Short Test Reports (QSTRs) that briefly summarize the standard(s) tested, the hardware and software used, the nature of the test, and the results.

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## 1.2 Purpose

The purpose of the informal test, reported in this QSTR, was to analyze Northrop Corporation's interpretation and use of the CALS standards in transferring technical publication data. The specific purpose of this test was to evaluate classified data coding in the CALS headers. NO CLASSIFIED data was included on the tape. Northrop used its CALS Technical Data Interchange System to produce data, in accordance with the standards, and delivered it to the AFCTN technical staff on a 9-track magnetic tape.

## 2. Test Parameters

Test Plan: AFCTB 93-034

Date of  
Evaluation: 14 April 1993

Evaluator: George Elwood  
Air Force CALS Test Bed  
Det 2 HQ ESC/ENCS  
4027 Colonel Glenn Hwy  
Suite 200  
Dayton OH 45431-1672

Data  
Originator: John P Kent  
Northrop Corporation  
B-2 Division  
L591/GK  
8900 East Washington Blvd  
Pico Rivera CA 90660  
(310) 948-0624

Data  
Description: Technical Manual Test  
1 Document Declaration file  
1 Document Type Definitions (DTD)  
1 Text file

Data  
Source System:

TEXT/Standard Generalized Markup Language (SGML)

**HARDWARE**

Unknown

**SOFTWARE**

Unknown

**Evaluation Tools Used:**

MIL-STD-1840A (TAPE)

SUN 3/280

AFCTN Tapetool v1.2.8 UNIX

AGFA Compugraphics CAPS/CALS v40.4

Texas Instrument (TI) Tapetool v1.0.1

Cheetah Gold 486

Datalogics ParserStation v3.36

Exoterica XGMLNormalizer v1.2e3.2

Exoterica Validator v2.0 EXL.

**Standards Tested:**

MIL-STD-1840A

MIL-M-28001A



### **3. 1840A Analysis**

#### **3.1 External Packaging**

The tape arrived at the Air Force CALS Test Bed (AFCTB) enclosed in a box in accordance with ASTM D 3951. The exterior of the box was marked with the magnetic tape warning label, as required by MIL-STD-1840A, para. 5.3.1.3.

The tape was enclosed in a barrier bag as required by MIL-STD-1840A, para. 5.3.1.2. Inspection of the tape reel showed the label indicating the recording density, as required by MIL-STD-1840A, para. 5.3.1. Enclosed in the box was a packing list showing all files recorded on the tape.

#### **3.2 Transmission Envelope**

The 9-track tape received by the AFCTB contained MIL-STD-1840A files. The files were named per the standard conventions.

##### **3.2.1 Tape Formats**

The tape was run through the AFCTN *Tapetool* v1.2.8 utility. No errors were encountered while evaluating the contents of the tape labels.

The tape was read using TI's *Tapetool* v1.0.1 without a reported error.

The tape was read without a reported error using AGFA's *CAPS read1840A* utility.

### 3.2.2 Declaration and Header Fields

No errors were found in the Document Declaration file or data file headers.

The physical structure of the tape meets the CALS MIL-STD-1840A requirements.

## 4. IGES Analysis

No Initial Graphics Exchange Specification (IGES) files were included on this tape.

## 5. SGML Analysis

The AFCTB has several parsers available for evaluating submitted DTD and Text files. These tools are not used to generate a pass/fail but to report how commercially available software can handle the files. These products are used in the development of technical publications and are good indicators of usability. The use of these products is not an endorsement nor an indication of CALS capability. All operations were performed using the default settings unless specified in the report. Changes to DTD or Text files required by each system are not documented in the report.

The Text and DTD files from the tape were evaluated using Datalogics' *ParseStation*. No errors were reported.

The Text and DTD files from this document were evaluated using Exoterica's *Validator* parser with no reported errors.

The Text and DTD files from this document were tested using Exoterica's *XGMLNormalizer* parser with no reported errors.

The Text and DTD files from the tape were evaluated using Public Domain's *sgmls* parser with no reported errors.

The dummy DTD and Text files meet the CALS MIL-M-28001A specification.

## **6. Raster Analysis**

No Raster files were included on this tape.

## **7. CGM Analysis**

No Computer Graphics Metafile (CGM) files were included on this tape.

## 8. Conclusions and Recommendations

In summary, the physical structure of the tape from Northrop Corporation is correct. The tape could be read properly using several *Tapetool* utilities without any reported errors.

The Text and DTD files meet the CALS MIL-M-28001A specification.

The tape and data files meet the CALS MIL-STD-1840A requirements.

## 9. Appendix A - Tapetool Report Logs

### 9.1 Tape Catalog

Air Force CALS Test Network Catalog Evaluation - Version 1.2; Release Number 8

Standards referenced:

MIL-STD-1840A (1987) - Automated Interchange of Technical Information

ANSI X3.27 (1987) - File Structure and labeling of Magnetic Tapes  
for Information Interchange

ANSI X3.4 (1986) - Coded Character Sets - 7 Bit ASCII

Wed Apr 14 10:10:49 1993

MIL-STD-1840A File Catalog

File Set Directory: /cals/tapetool8/Set084

Page: 1

File Name	File Type	Record Format/ Length	Block Length/Total	Selected/ Extracted
D001	Document Declaration	D/00260	02048/000001	Extracted
D001T001	Text	D/00260	02048/000009	Extracted
D001G002	DTD	D/00260	02048/000001	Extracted
D001H003	Output Specification	D/00260	02048/000006	Extracted

Catalog Process terminated normally.

---

## 9.2 Tape Evaluation Log

Air Force CALS Test Network Tape Evaluation - Version 1.2; Release Number 8  
Standards referenced:

ANSI X3.27 (1987) - File Structure and labeling of Magnetic Tapes  
for Information Interchange

ANSI X3.4 (1986) - Coded Character Sets - 7 Bit ASCII

Wed Apr 14 10:10:46 1993

ANSI Tape Import Log

Allocating tape drive /dev/rmt0...

/dev/rmt0 allocated.

VOL1ITDS01

CONTROLLER

4

Label Identifier: VOL1

Volume Identifier: ITDS01

Volume Accessibility:

Owner Identifier:

Label Standard Version: 4

HDR1D001

ITDS0100010001000100 93091 93091 000000 CONTROLLER

Label Identifier: HDR1

File Identifier: D001

File Set Identifier: ITDS01

File Section Number: 0001

File Sequence Number: 0001

Generation Number: 0001

Generation Version Number: 00

Creation Date: 93091

Expiration Date: 93091

File Accessibility:

Block Count: 000000

Implementation Identifier: CONTROLLER

HDR2D0204800260

00

Label Identifier: HDR2

Recording Format: D

Block Length: 02048

Record Length: 00260

Offset Length: 00

\*\*\*\*\* Tape Mark \*\*\*\*\*

Actual Block Size Found = 2048 Bytes.

Number of data blocks read = 1.

\*\*\*\*\* Tape Mark \*\*\*\*\*

EOF1D001 ITDS0100010001000100 93091 93091 000001 CONTROLLER

```
Label Identifier: EOF1
File Identifier: D001
File Set Identifier: ITDS01
File Section Number: 0001
File Sequence Number: 0001
Generation Number: 0001
Generation Version Number: 00
Creation Date: 93091
Expiration Date: 93091
File Accessibility:
Block Count: 000001
Implementation Identifier: CONTROLLER
```

EOF2D0204800260 00

```
Label Identifier: EOF2
Recording Format: D
Block Length: 02048
Record Length: 00260
Offset Length: 00
```

\*\*\*\*\* Tape Mark \*\*\*\*\*

HDR1D001T001 ITDS0100010002000100 93091 93091 000000 CONTROLLER

```
Label Identifier: HDR1
File Identifier: D001T001
File Set Identifier: ITDS01
File Section Number: 0001
File Sequence Number: 0002
Generation Number: 0001
Generation Version Number: 00
Creation Date: 93091
Expiration Date: 93091
File Accessibility:
Block Count: 000000
```

---

Implementation Identifier: CONTROLLER

HDR2D0204800260

00

Label Identifier: HDR2  
Recording Format: D  
Block Length: 02048  
Record Length: 00260  
Offset Length: 00

\*\*\*\*\* Tape Mark \*\*\*\*\*

Actual Block Size Found = 2048 Bytes.

Number of data blocks read = 9.

\*\*\*\*\* Tape Mark \*\*\*\*\*

EOF1D001T001

ITDS0100010002000100 93091 93091 000009 CONTROLLER

Label Identifier: EOF1  
File Identifier: D001T001  
File Set Identifier: ITDS01  
File Section Number: 0001  
File Sequence Number: 0002  
Generation Number: 0001  
Generation Version Number: 00  
Creation Date: 93091  
Expiration Date: 93091  
File Accessibility:  
Block Count: 000009  
Implementation Identifier: CONTROLLER

EOF2D0204800260

00

Label Identifier: EOF2  
Recording Format: D  
Block Length: 02048  
Record Length: 00260  
Offset Length: 00

\*\*\*\*\* Tape Mark \*\*\*\*\*

HDR1D001G002

ITDS0100010003000100 93091 93091 000000 CONTROLLER

Label Identifier: HDR1  
File Identifier: D001G002



---

File Set Identifier: ITDS01  
File Section Number: 0001  
File Sequence Number: 0003  
Generation Number: 0001  
Generation Version Number: 00  
Creation Date: 93091  
Expiration Date: 93091  
File Accessibility:  
Block Count: 000000  
Implementation Identifier: CONTROLLER

HDR2D0204800260

00

Label Identifier: HDR2  
Recording Format: D  
Block Length: 02048  
Record Length: 00260  
Offset Length: 00

\*\*\*\*\* Tape Mark \*\*\*\*\*

Actual Block Size Found = 2048 Bytes.

Number of data blocks read = 1.

\*\*\*\*\* Tape Mark \*\*\*\*\*

EOF1D001G002 ITDS0100010003000100 93091 93091 000001 CONTROLLER

Label Identifier: EOF1  
File Identifier: D001G002  
File Set Identifier: ITDS01  
File Section Number: 0001  
File Sequence Number: 0003  
Generation Number: 0001  
Generation Version Number: 00  
Creation Date: 93091  
Expiration Date: 93091  
File Accessibility:  
Block Count: 000001  
Implementation Identifier: CONTROLLER

EOF2D0204800260

00

Label Identifier: EOF2  
Recording Format: D  
Block Length: 02048

---

Record Length: 00260  
Offset Length: 00

\*\*\*\*\* Tape Mark \*\*\*\*\*

HDR1D001H003            ITDS0100010004000100 93091 93091 000000    CONTROLLER

Label Identifier: HDR1  
File Identifier: D001H003  
File Set Identifier: ITDS01  
File Section Number: 0001  
File Sequence Number: 0004  
Generation Number: 0001  
Generation Version Number: 00  
Creation Date: 93091  
Expiration Date: 93091  
File Accessibility:  
Block Count: 000000  
Implementation Identifier:    CONTROLLER

HDR2D0204800260

00

Label Identifier: HDR2  
Recording Format: D  
Block Length: 02048  
Record Length: 00260  
Offset Length: 00

\*\*\*\*\* Tape Mark \*\*\*\*\*

Actual Block Size Found = 2048 Bytes.

Number of data blocks read = 6.

\*\*\*\*\* Tape Mark \*\*\*\*\*

EOF1D001H003            ITDS0100010004000100 93091 93091 000006    CONTROLLER

Label Identifier: EOF1  
File Identifier: D001H003  
File Set Identifier: ITDS01  
File Section Number: 0001  
File Sequence Number: 0004  
Generation Number: 0001  
Generation Version Number: 00  
Creation Date: 93091  
Expiration Date: 93091

---

File Accessibility:  
Block Count: 000006  
Implementation Identifier: CONTROLLER

EOF2D0204800260

00

Label Identifier: EOF2  
Recording Format: D  
Block Length: 02048  
Record Length: 00260  
Offset Length: 00

\*\*\*\*\* Tape Mark \*\*\*\*\*

\*\*\*\*\* Tape Mark \*\*\*\*\*

##### End of Volume ITDS01 #####

##### End Of Tape File Set #####

Deallocating /dev/rmt0...

Tape Import Process terminated with 0 error(s), 0 warning(s),  
and 0 note(s).

### 9.3 Tape File Set Validation Log

Air Force CALS Test Network File Set Evaluation - Version 1.2; Release Number 8  
Standards referenced:

MIL-STD-1840A (1987) - Automated Interchange of Technical Information

Wed Apr 14 10:10:49 1993

MIL-STD-1840A File Set Evaluation Log

File Set: Set084

Found file: D001

Extracting Document Declaration Header Records...

Evaluating Document Declaration Header Records...

srcsys: John P. Kent, ITDS Chief Engineer, Northrop Corporation, B-2 Division, L591/GK  
E. Washington Blvd., Pico Rivera, CA 90660-3765 (310) 948-0624

srcdocid: STPRO25.2.6

srcrelid: NONE

chglvl: ORIGINAL

dteisu: 19910301

dstsys: Jeff Fisher, Integration Manager, USAF CALS Test Bed, HQ AFMC (I)/ENCT,  
TechnCenter, 4027 Col. Glenn Highway, Dayton, OH 45431-1601

dstdocid: STPRO25.2.6

dstrelid: NONE

dtetrn: 19930401

dlvacc: NONE

filcnt: T1, H1, G1

ttlcls: UNCLASSIFIED

doccls: *SECRET*

doctyp: NONE

docttl: FORTUNES

Found file: D001T001

Extracting Text Header Records...

Evaluating Text Header Records...

srcdocid: STPRO25.2.6

dstdocid: STPRO25.2.6

txtfilid: W

doccls: *SECRET*

notes: This file is actually UNCLASSIFIED but is labelled SECRET to test receipt of  
classified technical data.

Saving Text Header File: D001T001\_HDR  
Saving Text Data File: D001T001\_TXT

Found file: D001G002  
Extracting DTD Header Records...  
Evaluating DTD Header Records...

srcdocid: STPRO25.2.6  
dstdocid: STPRO25.2.6  
notes: NONE

Saving DTD Header File: D001G002\_HDR  
Saving DTD Data File: D001G002\_DTD

Found file: D001H003  
Extracting Output Specification Header Records...  
Evaluating Output Specification Header Records...

srcdocid: STPRO25.2.6  
dstdocid: STPRO25.2.6  
notes: NONE

Saving Output Specification Header File: D001H003\_HDR  
Saving Output Specification Data File: D001H003\_OS

Evaluating numbering scheme...  
No errors were encountered during numbering scheme evaluation.  
Numbering scheme evaluation complete.

Checking file count...  
No errors were encountered during file count verification.  
File Count verification complete.

No errors were encountered in Document D001.

No errors were encountered in this File Set.

MIL-STD-1840A File Set Evaluation Complete.